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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/619,361

Applicant(s)

USUDA ET AL.

Examiner

Ian N Moore

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on the amendment filed on 06 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 12-19 is/are rejected.
- 7) ☒ Claim(s) 9-11 and 20-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Claim objections, on claims 10,11,20-22 are withdrawn since they are being amended accordingly.
2. Claim rejections based on 35 USC § 112 second paragraph, on claims 7,9, 10, 18,20 and 21 are withdrawn since they are being amended accordingly.
3. Claims 1,2,6,7,9,10,12,13,17,18,20,21, and 22 are amended.
4. Claims 1-8,12-19 are rejected by the new ground(s) of rejection necessitated by the amendment.

Information Disclosure Statement

5. The information disclosure statement filed 8-2-2004 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because it does not contain PTO-1449 which list the all patents, publications, or other information submitted for consideration by the Office. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 2,7,13 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites, "a different corresponding prior transmit power control section" in line 13. It is unclear whether this limitation in line 13 is the same as "a different corresponding prior transmit power control section" in line 7-8.

Claim 13 is also rejected for the same as reason as stated above.

Claims 7 and 18 are also rejected since they are depended upon rejected claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1,4,5,8,12, 15,16, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amezawa (U.S. Patent 6,438,362) in view of Sawahashi (U.S. 5,590,409), and further in view of Miyake (U.S. 5,732,334).

Regarding Claims 1 and 12, Amezawa '362 discloses a CDMA reception apparatus comprising (see FIG. 1, a CDMA portable-telephone device; see col. 3, line 7-10):

propagation path variation estimation means (see **FIG. 1, Propagation path estimator 14 and 21**) for estimating a propagation path variation between respective prior control section to obtain sections and a current transport power control section to obtain propagation path variation values, wherein each of the propagation path variation estimation value is obtained by estimating a propagation path between a corresponding prior transmit power control section and the current transmit power control section (see **col. 3, line 24-26**; the estimator 14 and 21 estimate propagation-path characteristics and supply the estimated values of the propagation-paths. The estimator obtains the estimated value using a moving-averages method, wherein an averaging is executed over a predetermined number of the latest data in the signal input thereto one after another; note that the averaging is performed on the predetermined number of latest data (i.e. the latest input data compares to the previous numbers of data). The purpose of averaging is to obtain estimated path variation value among previous numbers of data and current number of data; see **col. 3, line 33-35**.)

propagation path variation correction means (see **FIG. 1, Subtractor 15**) means for generating a plurality of corrected products, each corrected product obtained by subtracting at least one of vector, amplitude and/or power of a received signal of the corresponding prior transmit power control section by said propagation path variation estimation value obtained by estimating the propagation path variation between the corresponding prior transit power control section and the current transmit power control section (see **col. 3, line 57-61**; the subtracter 15, provided with the estimated value, obtains a corrected value by subtracting the estimated value from the received demodulated pilot signal PD1. Then, the subtracter 15 supplies the corrected value to the interference-signal power calculator 17);

and averaging means (see FIG. 1, Interference signal power calculator 24) for averaging the plurality of corrected products (see col. 3, line 61-65; the interference-signal power calculator 17 averages the corrected value by using a weighted averaging technique with a forgetting factor so as to improve the accuracy of the interference-signal power).

Amezawa'362 does not explicitly disclose different transmit power control sections.

However, the above-mentioned claimed limitations are taught by Sawahashi. In particular, Sawahashi teaches estimation, correction and controlling variation between respective prior control section to obtain sections (see col. 4, lines 20-21; see col. 4, lines 55-56; previous power control period) and a current transport power control section (see col. 4, lines 18-19; see col. 4, lines 53-55; current power control period), wherein each of the propagation path variation estimation value is obtained by estimating a propagation path between a different corresponding prior transmit power control section and the current transmit power control section (Abstract; see FIG. 6; see col. 4, lines 15-67; see col. 7, lines 1-41; note that variation/different value is determined between a previous power control period/section and current power control period/section).

In view of this, having the system of Amezawa'362 and then given the teaching of Sawahashi, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Amezawa'362, for the purpose of providing different transmit power control sections/period, as taught by Sawahashi, since Sawahashi states the advantages/benefits at col. 4, lines 1-10 and col. 5, lines 1-26 that it would primary control the transmission power of the mobile station at high accuracy by switching between close and open loop power control. The motivation being that by collecting, comparing

different transport power values from previous to current, it can estimate transmit/receive the signal power, thereby reducing the interference to other mobile and base station.

Neither Amezawa'362 nor Sato'324 explicitly discloses correction means for multiplying.

However, the above-mentioned claimed limitations are taught by well-established teaching in art. Well-established teaching in art teaches correction means for multiplying. Note that Amezawa'362 performs the correction by subtraction in order to obtain a result, which is used for averaging. Thus, it is clear that one skill in the art can also performs correction by multiplying in order obtain the same result as subtraction, which is used for averaging. Regardless of the type of method (i.e. subtraction or multiplying) being used, the end result, a corrected data in order to perform averaging, is the same. In particular, Miyake discloses correction means of multiplying (see FIG. 2, Multiplier 1851 for correction data; see Abstract, col. 3, lines 29-34; see col. 6, lines 45-50).

In view of this, having the combined system of Amezawa'362 and Sawahashi, then given the teaching of Miyake, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Amezawa'362 and Sawahashi, for the purpose of correcting by multiplying, as taught by Miyake, since Miyake states the advantages/benefits at col. 3, lines 1-36 that it would correct errors in the automatic power control circuitry in order to generate an RF output signal having predetermined power. The motivation being that by performing the multiplication to correct data/value, it can create an alternative and easier way to build the efficient algorithm for correcting data/value, and reduce the hardware size and cost.

Regarding Claims 4 and 15, the combined system of Amezawa, Sawahashi and Miyake discloses said averaging means as described in Claims 1 and 12 above. Amezawa further discloses wherein said averaging means is provided with amplitude addition and means for converting amplitude into a power (see col. 1, line 42-46; note that s_1 , s_2 and i_1 , i_2 respectively represent the values of the desired-signal amplitude and the interference-signal amplitude contained in the received signals r_1 and r_2 . The amplitudes are added in Eqs. (1)-(6). Also, see col. 4, line 52-57; similarly, the interference-signal power I_1 corresponds to the power of the signal i_1 in Eqs. (1)-(6); see col. 3, line 18-36. The SIR processor 18 also converts amplitudes into a power). Amezawa also discloses division means for performing division (see col. 7, lines 4-6). Sawahashi also discloses addition means for performing addition (see FIG. 7A, combiner 110; see col. 7, lines 55-64). Miyake discloses addition means for performing addition (see FIG. 2, adder 1854; see col. 10, lines 50-60). In addition, the “addition means”, “division means”, and “averaging means” are well known in the art. In order to perform “averaging” over plurality of elements the following steps must be done utilizing well known mathematical technique: “addition means for performing amplitude addition” (i.e. First, add amplitude of each element), “division means for dividing added by said amplitude addition means with a number of amplitudes added” (Second, divide the sum of amplitude by the total number of amplitudes).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Amezawa and Sawahashi as taught by Miyake and established teaching of well known mathematical techniques of estimating for the purpose of estimating power utilizing amplitudes. The motivation being

that amplitudes cannot be averaged without converting into power in order to estimate the power control, which reduces the interfaces among mobile stations.

Regarding Claims 5 and 16, the combined system of Amezawa, Sawahashi and Miyake discloses averaging means as described in claims 1 and 12 above. Amezawa further discloses the averaging means is provided with the power calculation (see col. 3, line 18-26; note that the SIR processor 18 are supplied from the desired-signal power calculator 16 and the interference-signal power calculator 17 the desired-signal power S_1 and the interference-signal power I_1 ; see col. 4, line 52-57). Amezawa also discloses division means for performing division (see col. 7, lines 4-6). Sawahashi also discloses addition means for performing addition (see FIG. 7A, combiner 110; see col. 7, lines 55-64). Miyake discloses addition means for performing addition (see FIG. 2, adder 1854; see col. 10, lines 50-60). Moreover, the “addition means”, “division means”, and “averaging means” are well known in the art. In order to perform averaging over plurality of elements the following steps must be done utilizing well known mathematical technique: “addition means for performing power addition” (i.e. First, add power of each element), “division means for dividing added by said power addition means with a number of powers added” (Second, divide the sum of power by the total number of powers).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Amezawa and Sawahashi, as taught by Miyake and well known mathematical techniques for the same reasons as discussed above in Claims 4 and 15.

Regarding Claims 8 and 19, Amezawa discloses setting an averaging section setting means for setting an averaging section (see col. 3, line 61-65).

9. Claims 2 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amezawa in view of Sawahashi, and further in view of Miyake.

Regarding Claims 2 and 13, Amezawa discloses a CDMA reception apparatus and method comprising:

transmit power changing amount estimation means (**see FIG. 1, Propagation path estimator 14 and 21**) for estimating changing amounts varied by transmit power of a communication partner station varied by transmit power control (see col. 3, lines 5-15; CDMA telephone device or its partner base station) between respective prior transmit power control sections and current transmit power control section to obtain transmit power changing amount estimation values, wherein each of the propagation path variation estimation value is obtained by estimating a propagation path between a corresponding prior transmit power control section and the current transmit power control section (**see col. 3, line 24-26**; the estimator 14 and 21 estimate propagation-path characteristics and supply the estimated values of the propagation-paths. The estimator obtains the estimated value using a moving-averages method, wherein an averaging is executed over a predetermined number of the latest data in the signal input thereto one after another; note that the averaging is performed on the predetermined number of latest data (i.e. the latest input data compares to the previous numbers of data). The purpose of averaging is to obtain estimated path variation value among previous numbers of data and current number of data; **see col. 3, line 33-35**);

transmit power changing amount correction means (see **FIG. 1, Subtractor 15**) for generating a plurality of corrected products, each corrected product obtained by subtracting at least one of vector, amplitude and/or power of a received signal of the corresponding prior transmit power control section by said propagation path variation estimation value obtained by estimating the propagation path variation between the corresponding prior transmit power control section and the current transmit power control section (see **col. 3, line 57-61**; the subtracter 15, provided with the estimated value, obtains a corrected value by subtracting the estimated value from the received demodulated pilot signal PD1. Then, the subtracter 15 supplies the corrected value to the interference-signal power calculator 17);

and averaging means (see **FIG. 1, Interference signal power calculator 24**) for averaging the plurality of corrected products (see **col. 3, line 61-65**; the interference-signal power calculator 17 averages the corrected value by using a weighted averaging technique with a forgetting factor so as to improve the accuracy of the interference-signal power).

Amezawa'362 does not explicitly disclose different transmit power control sections.

However, the above-mentioned claimed limitations are taught by Sawahashi. In particular, Sawahashi teaches transmit power changing amount estimation means for estimating changing amounts of transmit power of a communication partner station (see **FIG. 1, BS1**; see **col. 1, lines 55-67**), transmit power changing amount correction and controlling variation between respective prior control section to obtain sections (see **col. 4, lines 20-21**; see **col. 4, lines 55-56**; previous power control period) and a current transmit power control section (see **col. 4, lines 18-19**; see **col. 4, lines 53-55**; current power control period), wherein each of the propagation path variation estimation value is obtained by estimating a

propagation path between a different corresponding prior transmit power control section and the current transmit power control section (Abstract; see FIG. 6; see col. 4, lines 15-67; see col. 7, lines 1-41; note that variation/different value is determined between a previous power control period/section and current power control period/section).

In view of this, having the system of Amezawa'362 and then given the teaching of Sawahashi, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Amezawa'362, for the purpose of providing different transmit power control sections/period, as taught by Sawahashi, since Sawahashi states the advantages/benefits at col. 4, lines 1-10 and col. 5, lines 1-26 that it would primary control the transmission power of the mobile station at high accuracy by switching between close and open loop power control. The motivation being that by collecting, comparing different transport power values from previous to current, it can estimate transmit/receive the signal power, thereby reducing the interference to other mobile and base station.

Neither Amezawa'362 nor Sato'324 explicitly discloses correction means for multiplying.

However, the above-mentioned claimed limitations are taught by well-established teaching in art. Well-established teaching in art teaches correction means for multiplying. Note that Amezawa'362 performs the correction by subtraction in order to obtain a result, which is used for averaging. Thus, it is clear that one skill in the art can also performs correction by **multiplying** in order obtain the same result as subtraction, which is used for averaging. Regardless of the type of method (i.e. subtraction or multiplying) being used, the end result, a corrected data in order to perform averaging, is the same. In particular, Miyake

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discloses correction means of multiplying (see FIG. 2, Multiplier 1851 for correction data; see Abstract, col. 3, lines 29-34; see col. 6, lines 45-50).

In view of this, having the combined system of Amezawa'362 and Sawahashi, then given the teaching of Miyake, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Amezawa'362 and Sawahashi, for the purpose of correcting by multiplying, as taught by Miyake, since Miyake states the advantages/benefits at col. 3, lines 1-36 that it would correct errors in the automatic power control circuitry in order to generate an RF output signal having predetermined power. The motivation being that by performing the multiplication to correct data/value, it can create an alternative and easier way to build the efficient algorithm for correcting data/value, and reduce the hardware size and cost.

10. Claims 3 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amezawa in view of Sawahashi and Miyake, as described above in claims 1 and 12 above, and further in view of Ling (U.S. Patent 5,297,161).

Regarding Claims 3 and 14, the combined system of Amezawa, Sawahashi, and Miyake discloses the averaging means as described in claims 1 and 12 above. Amezawa further discloses wherein said averaging means and converting into a power (**see col. 3, line 18-26**; power calculator calculates/converts the desire signal and interference power from estimation values. Then, the power values are averaged; **see col. 4, line 52-57**). Amezawa also discloses division means (see col. 7, lines 4-6). Sawahashi also discloses addition means

(see FIG. 7A, combiner 110; see col. 7, lines 55-64). Miyake discloses addition means (see FIG. 2, adder 1854; see col. 10, lines 50-60).

Neither Amezawa, Sawahashi nor Miyake explicitly disclose vector and converting vector divided by said division means into a power (see **Ling '161 Abstract**, a method and apparatus is provided for estimating signal power. The estimating is accomplished by correlating (206) an input data vector (204) with a set of mutually orthogonal codes to generate a set of output values. The input data vector (204) consists of data samples of a received orthogonal coded signal (202)).

However, this limitation is taught by Ling '161. Moreover, well-established teaching in art discloses the “addition means”, “division means”, and “averaging means”. In particular, it is well known in the art that in order to perform “averaging” over plurality of elements the following steps must be done utilizing well known mathematical technique: “addition means for performing vector addition” (i.e. First, add vector value of each element), “division means for dividing a vector added by said vector addition means with a number of vectors added” (Second, divide the sum of vectors by the total number of vectors).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Amezawa, Sawahashi and Miyake, as taught by Ling '161 and utilizing well known mathematical technique for the purpose of averaging power which is accomplished by correlating an input data vector with a set of mutually orthogonal codes to generate a set of output values, see Ling '161 col. 4, line 65-68. The motivation being that vectors cannot be averaged without converting into power in order to estimate the power control, which reduces the interfaces among mobile stations.

11. Claims 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amezawa in view of Sawahashi and Miyake, as applied to claims 1 and 12 above, and further in view of Rezaiifar (U.S. 6,377,809).

Regarding Claims 6 and 17, the combined system of Amezawa, Sawahashi and Miyake discloses propagation path variation estimation means for estimation propagation path various from transmit power control sections as described in claims 1 and 12 above.

Neither Amezawa, Sawahashi, nor Miyake explicitly discloses wherein using a channel (see **Rezaiifar'809 FIG. 2 and 3**; control channel) not performing transmit power control whose transmit power is not controlled (see **Rezaiifar'809 col. 8, lines 20-34, 20-34; see col. 9, lines 1-32**; note that the control channel is used to transmit control frames when there is scheduling or control information (i.e. estimation means), when transmit power control is not performing since power control bits are not transmitting. Since power control bits are not transmitting on the control channel, transmit power not controlled).

However, this limitation is taught by Rezaiifar'809. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Amezawa, Sawahashi and Miyake, as taught by Rezaiifar'809 for the purpose of providing a control channel to send control information while transmit power control not performing nor transmit power is controlled, since Rezaiifar'809 states in col. 9, line 15-24 that it will increase capacity and minimize interference. The motivations being that by utilizing the control channel to send control information while not performing

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transmits power control, it will increase radio bandwidth capacity and decrease the interference.

12. Claims 7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amezawa in view of Sawahashi and Miyake, as applied to claims 2 and 13 above, and further in view of Dohi (U.S. Paten 5,604,766).

Regarding claims 7 and 18, the combined system of Amezawa, Sawahashi, and Miyake discloses the CDMA reception apparatus, wherein said transmit power changing amount estimation as described in Claims 2 and 13 above. Sawahashi discloses disclose a transmit power changing amount using a transmit power control section transmitted from said CDMA reception (see abstract).

Neither Amezawa, Sawahashi, nor Miyake disclose an indicator. This limitation is taught by Dohi. Dohi discloses a transmit power changing amount using a transmit power control indicator transmitted from said CDMA reception (see col. 5, line 49-55; note that if the measured result is greater than the reference SIR, the mobile station transmits a transmission power control bit which commands the base station to reduce its transmission power. On the contrary, if the measured result is less than the reference SIR, the mobile station transmits a transmission power control bit, which commands the base station to increase its transmission power (step S24). The transmission power control bit is inserted into an information signal in a reverse frame, and is transmitted to the base station).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Amezawa, Sawahashi, and Miyake,

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as taught by Dohi '766 for the purpose of determining a transmission power control bit for controlling the transmission power of the base station on the basis of the measured result, see Dohi '766 col. 2, line 25-28. The motivation being that by sending power control indicator, it can alert the remote station to adjust the power accordingly.

Allowable Subject Matter

13. Claims 9-11 and 20-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

14. Applicant's arguments with respect to claim 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N Moore whose telephone number is 571-272-3085. The examiner can normally be reached on M-F: 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

INM
1/7/05


KENNETH VANDERPUYE
PRIMARY EXAMINER

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